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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,345	10/05/2000	David W. Baarman	3086/1230 (BH 2068)	7831

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EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,345

Applicant(s)

BAARMAN ET AL.

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 2,30,31 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-30,32-43 and 45-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-59 have been considered but are moot in view of the new ground(s) of rejection.

Specification

2. The examiner accepts applicant's proposed title. A proper amendment changing the title must be timely submitted.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-6, 8-9, 11-12, 16, 18, 29, 32-35, 37, 41, 54-56, 58, and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,731,545 to Lerner et al.

Lerner et al. clearly teaches the construction of a portable self-contained power conversion unit without flux concentrators, comprising:

a housing (10) that includes an inlet (12) supplied with a liquid from a liquid treatment system (column 2, lines 55-58), the fluid being drinking water, and an outlet (14), comprising a first section and a second section, the first section detachably coupled with the second section to facilitate assembly and maintenance;

a rotor (part of generator 16) which comprises a shaft (40) and a turbine rotor (36) including a helical ridge/vanes (37) rotatably positioned within the housing such that the rotor is rotated by a flow of fluid through the housing;

a stator (part of generator 16) fixedly positioned within the housing to surround the rotor such that rotation of the rotor induces the production of electricity, which can be alternating or direct current by using either an AC or DC generator, or a rectified AC to DC generator (column 2, lines 37-45), wherein the rotor and stator are disposed in the second section and the turbine nozzle is disposed in the first section; and

a turbine nozzle (44) fixedly coupled with the housing, wherein the turbine nozzle:

comprises a tip and a plurality of struts operable to direct the flow of water to the rotor at increased velocity to rotate the rotor, and

is operable to increase the velocity of the fluid and direct the flow of fluid to achieve a predetermined angle of incidence of the fluid upon the rotor.

6. With regards to claims 29, 32-35, 37, 58, and 59 Lerner et al. clearly teaches the construction of a hydro-power generation system with all the previously discussed elements, which make the method of using it as claimed in the previously referred claims inherent to one with ordinary skill in the art.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7, 36 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of U.S. Patent No. 4,740,711 to Sato et al.

Lerner et al. disclose the construction of a portable self-contained power conversion unit without flux concentrators as described above.

However, it fails to disclose:

a stator is fixedly positioned to surround the housing adjacent the rotor,

plurality of exit guide vanes and a fin, and

a method of supplying electricity comprising the act of channeling the fluid to the outlet with the plurality of exit guide vanes.

Sato et al. teach the construction of a pipeline built-in electric power generating set having a stator (13) fixedly positioned to surround the housing adjacent the rotor (12), a plurality of exit guide vanes (18) and a fin, for the purpose of enabling a flow of steam (or gas) from the pipes through the in-line generator.

It would have been obvious to one skilled in the art at the time the invention was made to use the stator/rotor arrangement, the exit guide vanes, and the fin disclosed by Sato et al. on the portable self-contained power conversion unit disclosed by Lerner et al. for the purpose of enabling a flow of steam (or gas) from the pipes through the in-line generator.

9. Claims 10, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of U.S. Patent No. 3,913,399 to Sheeks.

Lerner et al. disclose the construction of a portable self-contained power conversion unit without flux concentrators as described above.

However, it fails to disclose a system, wherein:

the rotation of the rotor is operable to provide flow-based measurements of the fluid; and

the rotor or stator comprises a permanent magnet.

Sheeks teaches the construction of a rate-of-flow meter, wherein the rotation of the rotor is operable to provide flow-based measurements of the fluid for the purpose of providing an improved turbine type of rate-of-flow meter with attached generator, and the rotor or stator comprise a permanent magnet.

It would have been obvious to one skilled in the art at the time the invention was made to use the rate-of-flow meter, and the permanent magnet in either rotor or stator, disclosed by Sheeks on the hydro-power generation system disclosed by Sato et al. for the purpose of providing an improved turbine type of rate-of-flow meter with attached generator.

10. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of common knowledge in the art.

Lerner et al. disclose the claimed invention except for dynamically adjusting the voltage and current levels with a plurality of switchable coils in response to initial and continued energization of a common UV light source by the electricity generated, by using a plurality of taps.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjusting the voltage and current levels with a plurality of switchable coils by using a plurality of taps since it was known in the art that changing the coil configuration from parallel to series or from series to parallel would in fact allow the generator to provide different voltage levels of electricity.

11. Claims 19-24, 28, 42-43, 45-47, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of U.S. Patent No. 4,246,753 to Redmond.

Lerner et al. clearly teaches the construction of a portable self-contained power conversion unit without flux concentrators as described above.

However, it fails to disclose a unit in which the fluid is operable to fall by gravity through the airspace to the outlet and be channeled out of the housing.

Redmond teaches the construction of an energy salvaging system having gravitationally conducting wet sewage for the purpose of allowing shaft (24) to do work, like generating electricity via electric generator (52) in amounts suitable for lighting.

It would have been obvious to one skilled in the art at the time the invention was made to use the energy salvaging system configuration disclosed by Redmond on the portable self-contained power conversion unit disclosed by Lerner et al. for the purpose of allowing a shaft to do work, like generating electricity via an electric generator in amounts suitable for lighting.

12. With regards to claims 20-24, and 28 Lerner et al. disclose:

a nozzle which is operable to change the velocity of fluid flowing therethrough to subsonic speed;

a generator that generates alternating or direct current by using either an AC or DC generator, or a rectified AC to DC generator (column 2, lines 37-45);

the impeller comprising a plurality of blades (37).

13. With regards to claims 42-43, 45-47, 51 and 52, Lerner et al. in view of Redmond disclose the construction of a portable self-contained power conversion unit without flux

concentrators with all the previously discussed elements, which make the method of using it as claimed in the previously referred claims inherent to one with ordinary skill in the art.

14. Claims 26-27, and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of U.S. Patent No. 4,246,753 to Redmond as applied to claims 19-24, 28, 42-43, 45-47, 51, and 52 above, further in view of common knowledge in the art.

Lerner et al. in view of Redmond disclose the claimed invention except for:

the use of a plurality of taps and switchable coils, and

adjusting the voltage and current levels with a plurality of switchable coils by using a plurality of taps.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the voltage and current levels with a plurality of switchable coils by using a plurality of taps since it was known in the art that changing the coil configuration from parallel to series or from series to parallel would in fact allow the generator to provide different voltage levels of electricity.

15. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of common knowledge in the art.

Lerner et al. disclose the claimed invention except for dynamically adjusting the voltage and current levels with a plurality of switchable coils in response to initial and continued energization of a common UV light source by the electricity generated, by using a plurality of taps.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjusting the voltage and current levels with a plurality of switchable

coils by using a plurality of taps since it was known in the art that changing the coil configuration from parallel to series or from series to parallel would in fact allow the generator to provide different voltage levels of electricity.

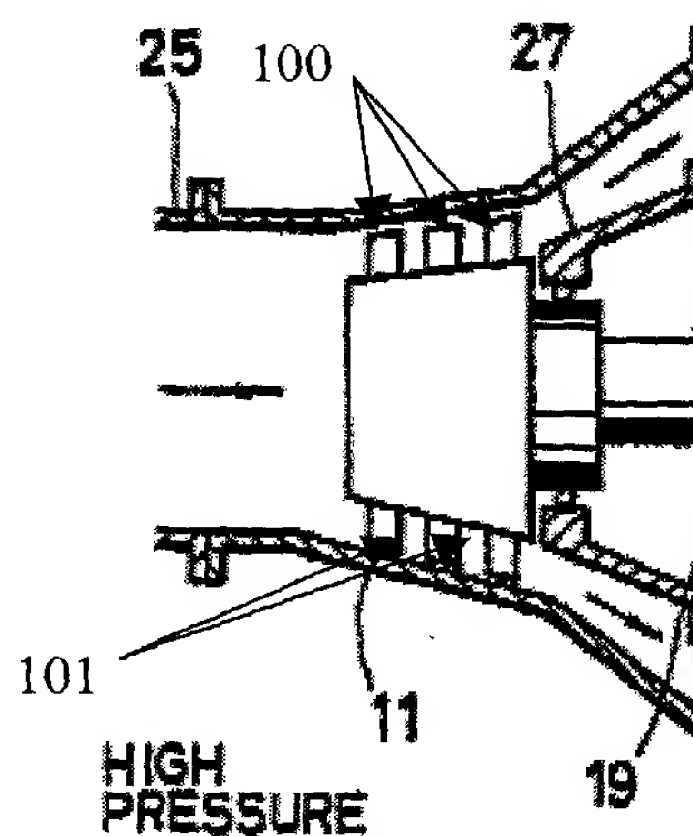
16. Claims 25 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,731,545 to Lerner et al. in view of U.S. Patent No. 4,246,753 to Redmond as applied to claims 19-24, 28, 42-43, 45-47, 51, and 52 above, further in view of us 4,740,711 to Sato et al.

Lerner et al. in view of Redmond disclose the claimed invention except for each of the blades comprise:

at least two paddles, and

a slot operable to allow energy in the stream of fluid to pass to another of the blades as the impeller rotates.

Sato et al. teach the construction of a pipeline built-in electric power generating set having multiple paddles (100) forming blades with slots (101), for the purpose of enabling a flow of steam (or gas) from the pipes through the in-line generator.



It would have been obvious to one skilled in the art at the time the invention was made to use the multiple paddles and slots to form a blade as disclosed by Sato et al. on the portable self-contained power conversion unit having parabolic shaped blades disclosed by Lerner et al. for the purpose of enabling a flow of steam (or gas) from the pipes through the in-line generator.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

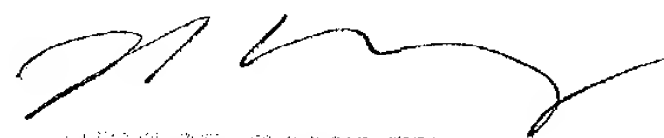
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramírez can be reached on (703) 308-1371. The fax phone numbers for

the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
October 10, 2002



HECTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
OCT 10 2002